

**IUCN/ UNEP meeting on
'Assessing biodiversity impacts along the life cycle of goods and services'**

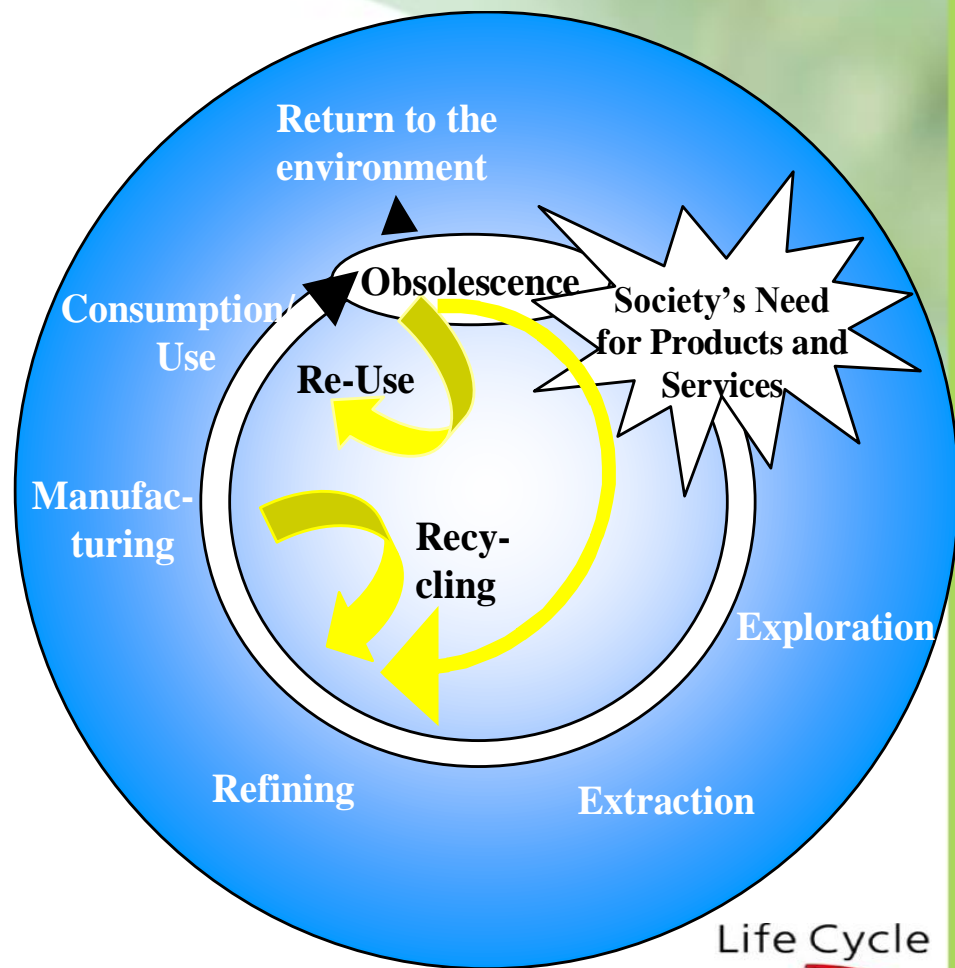
**Introduction:
The life cycle approach and the
challenges of integrating biodiversity**

United Nations Environment Programme
Division of Technology, Industry and Economics
Sustainable Consumption and Production Branch



Life Cycle Thinking

- ▶ Life cycle thinking provides a holistic framework taking the entire system of a product, process or service into account, enabling us to make realistic choices for the longer term taking multiple factors into account.
- ▶ Every actor in the life cycle has a role to play and a responsibility to cope with (Extended Producer Responsibility)



Mission and added value



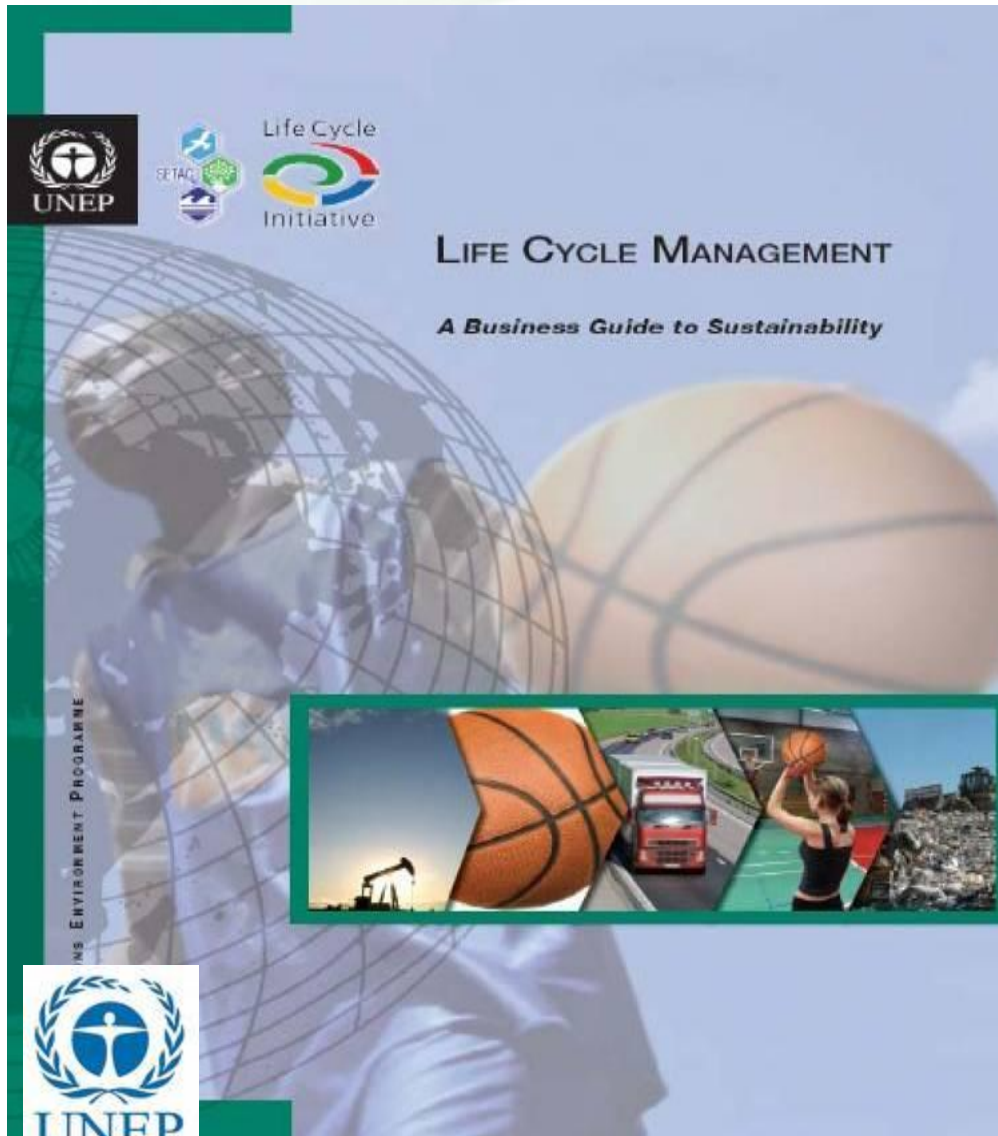
Public Private Partnership
launched by UNEP and SETAC in 2002

Mission: ***To bring science-based life cycle approaches into practice worldwide***

Added Value: ***With the ability to mobilize an established and growing network of over 1000 global experts comes the ability to facilitate and gather best practices and to disseminate the results worldwide***



Life Cycle Management

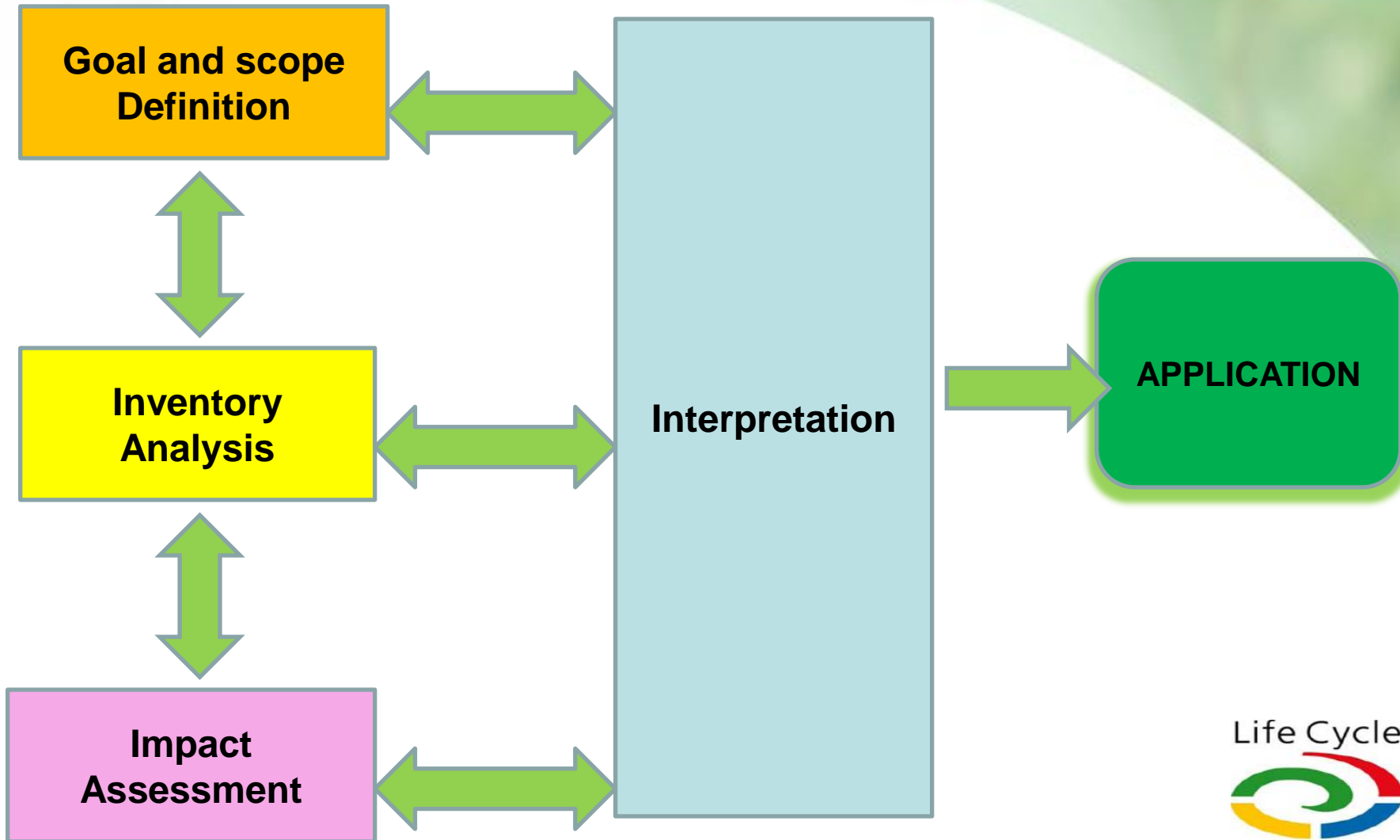


Life Cycle Management (LCM)

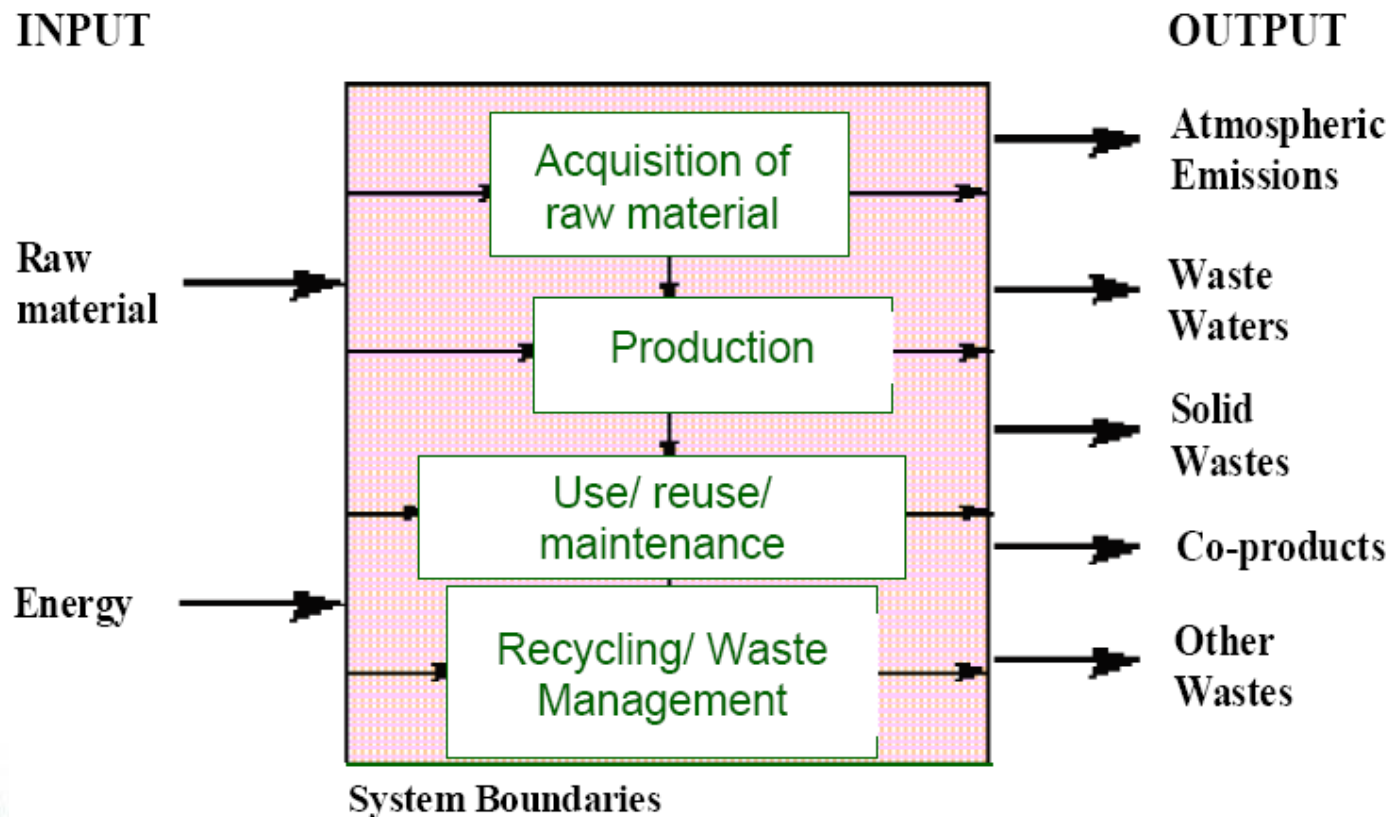
Is a product management system aiming to minimize environmental and socio-economic burdens associated with an organization's product or product portfolio during its entire life cycle and value chain.

Structure of LCA

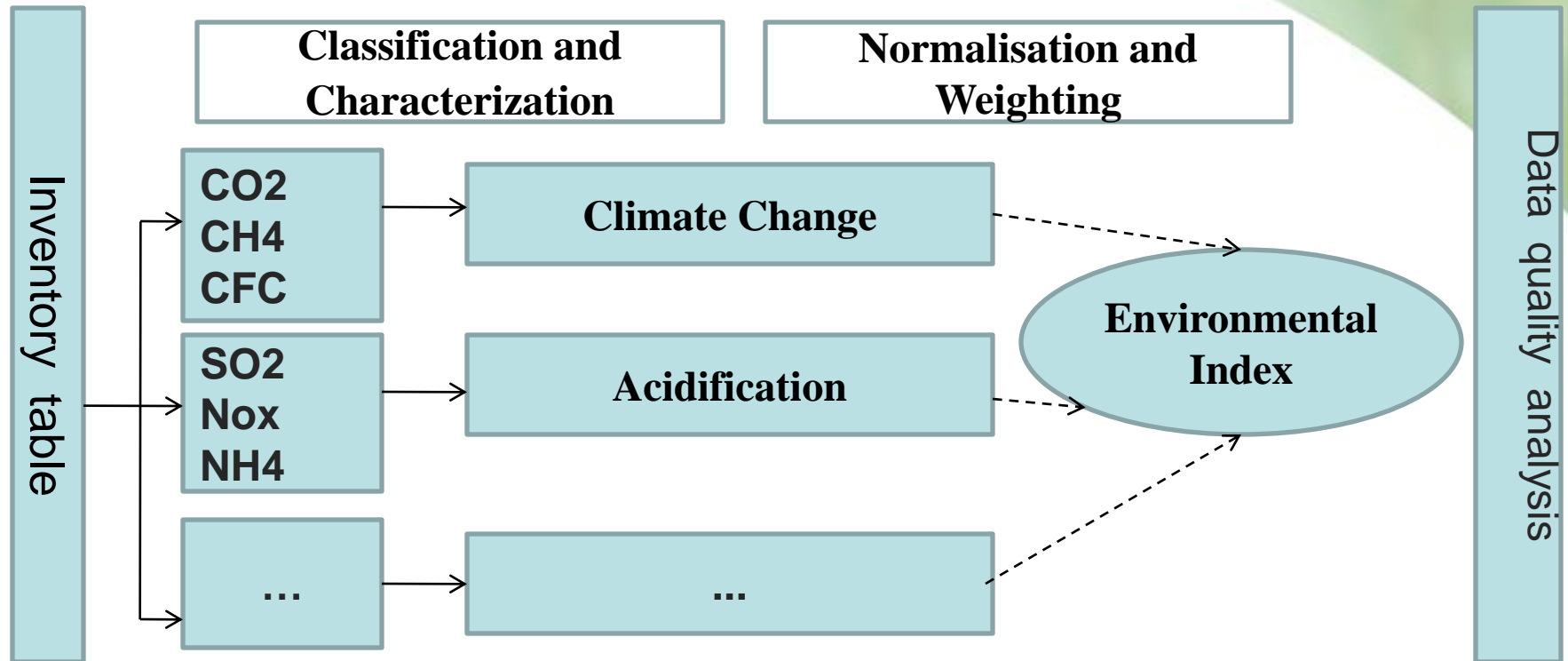
According to ISO 14040



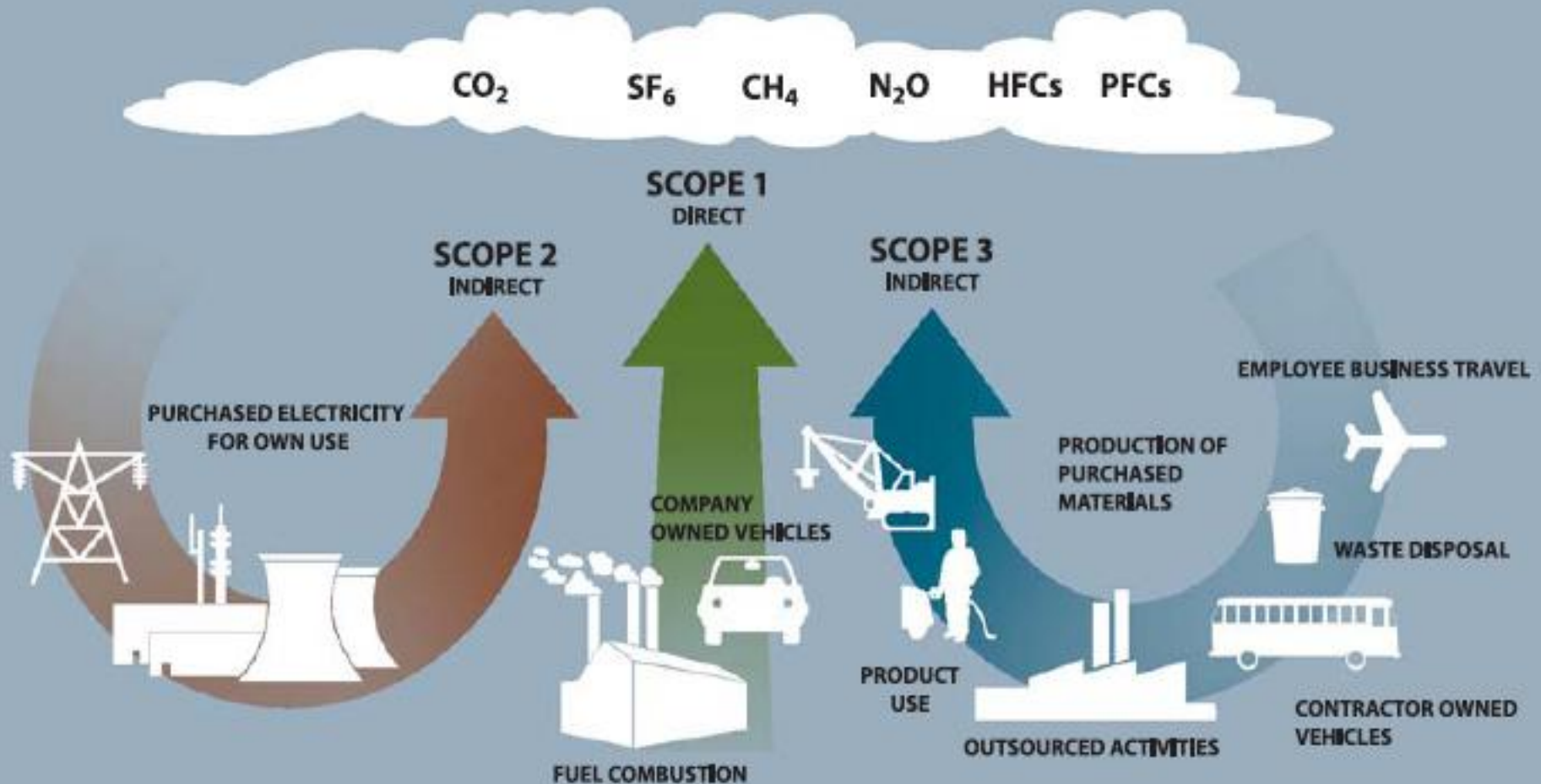
Life Cycle Inventory (LCI) Analysis



Life Cycle Impact Assessment (LCIA)



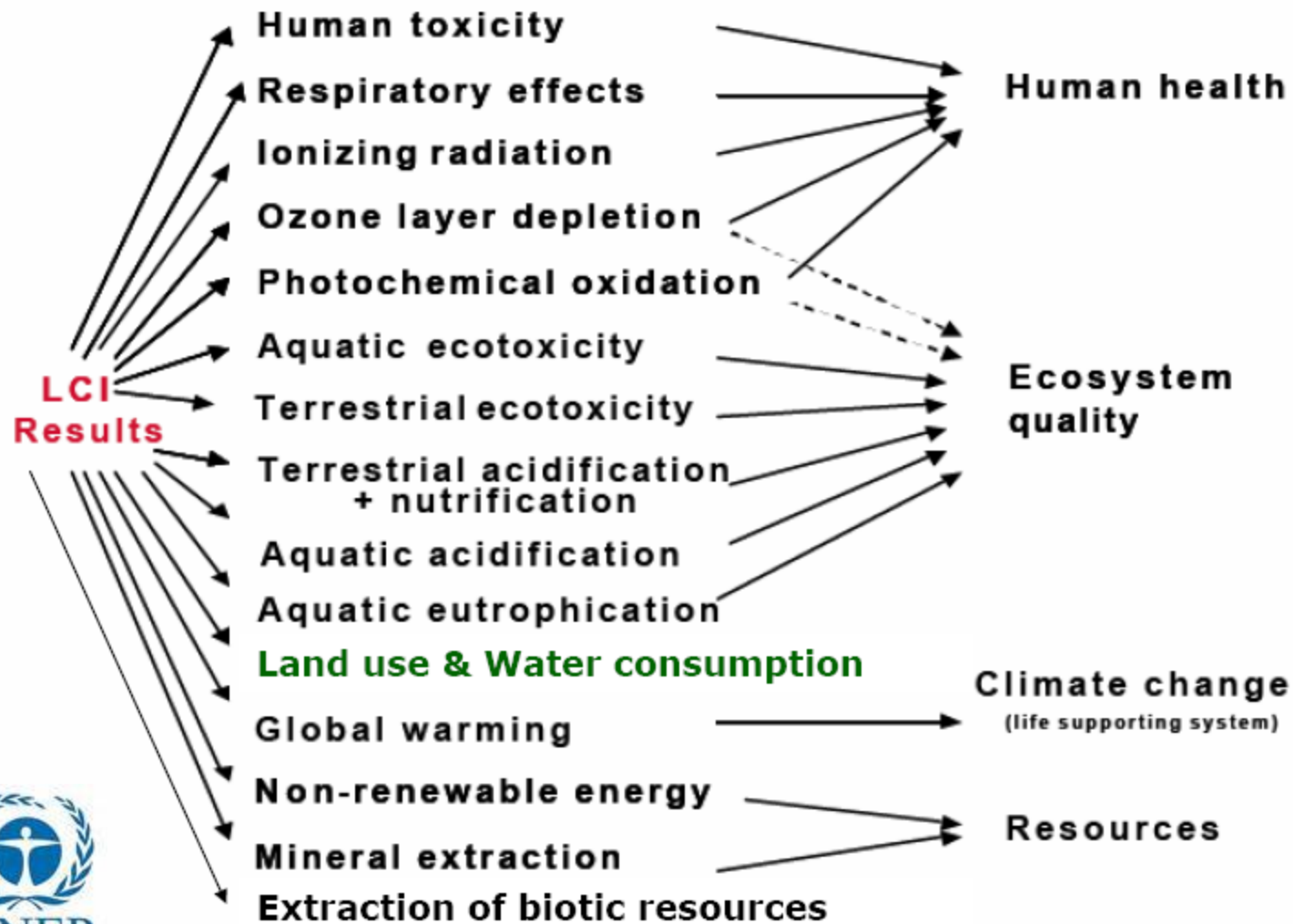
Carbon Footprinting: Supply Chain & Life Cycle



Resource use intensity and impact assessment indicators and methods

UNEP Midterm Strategy Priorities	Resource Efficiency	Other Environmental Priorities (CC, HS, EM)	
Energy Demand (IEA)	Energy	Climate Change (CC)	Carbon Footprint (WRI/ WBCSD, ISO)
Water Footprint (WWF/ WFN)	Water	Hazardous Substances (HS)	USEtox (SETAC)
Material Intensity (WI)	Materials	Ecosystems Management (EM)/ Biodiversity	Biodiversity Damage (IUCN)

Linking LCI results via the midpoint categories to damage





**ECOSYSTEMS
AND HUMAN
WELL-BEING**

Synthesis

MILLENNIUM ECOSYSTEM ASSESSMENT

Main direct drivers of change in Biodiversity



MILLENNIUM ECOSYSTEM ASSESSMENT (MA)		Habitat Change	Climate Change	Invasive Species	Over-exploitation	Pollution (Introgen, Phosphorus)
Forest	Boreal	↗	↑	↗	→	↑
	Temperate	↘	↑	↑	→	↑
	Tropical	↑	↑	↑	↗	↑
Dryland	Temperate grassland	↗	↑	→	→	↑
	Mediterranean	↗	↑	↑	→	↑
	Tropical grassland	↗	↑	↑	→	↑
	Desert	→	↑	→	→	↑
Inland water	↑	↑	↑	→	↑	



The challenges of integrating biodiversity

- ▶ **Global efforts are directed towards decoupling environmental impacts from economic growth (Marrakech Process, Resource Panel, Green Economy Initiative), life cycle approach basis to avoid burden shifting**
- ▶ **LCA as tool conceived to prevent environmental impact in product development could help to put MA learnings into use**
- ▶ **Lack of awareness and of knowing each other in both communities (LCA and MA)**
- LCA not the only tool to be used by business in product stewardship; certification schemes for resource management
- Advocacy needed to ensure that all LCIA categories referring to direct drivers of change in biodiversity considered
- Research projects could help to integrate current state of LCIA and MA learnings for more visibility to biodiversity impacts

Project idea: Biodiversity footprint

▶ **Overall Objective**

- ▶ The ultimate goal is to increase the visibility of impacts on ecosystem and biodiversity due to goods and services for decision makers, in particular from industry and business.

▶ **Specific Objectives**

- ▶ Better communication on the relevance of the measured impacts in LCA for ecosystem change
- ▶ Improvement of the indicators used, taking into consideration the learnings of the MA.
- ▶ Bringing together different stakeholders that contribute to and benefit from the better integration

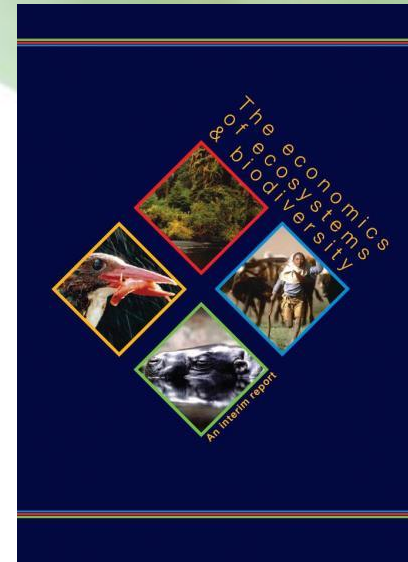
▶ **Outputs**

- ▶ Awareness increased on impacts biodiversity due to products
- ▶ Global Roadmap for using MA Learning in the LCA established
- ▶ Models bridging the gaps in impacts on ecosystems developed

First common inputs needed later in 2009!

TEEB – The Economics of Ecosystems and Biodiversity

1. A global valuation study providing conceptual background for guidance documents;
2. A guidance report for international and national policymakers;
3. A guidance report for regional and local administrators;
4. **A guidance report for business and industry**
 - Coordinator Joshua Bishop (IUCN), together with Cornis von de Lugt (UNEP) and Sean Gilbert (GRI)
 - ❖ Framing the targets: not net loss and life cycle thinking
 - ❖ Measuring, valuing and reporting biodiversity impacts and dependencies
 - ❖ Overview of approaches
 - ❖ Mainstreaming in corporate decision-making
5. A guidance report for consumers.



Third Business & the 2010 Biodiversity Challenge Conference

- ❖ In conjunction with the UNEP Business and Industry Global Dialogue
- ❖ **Session on Biodiversity Impact Assessment and Life Cycle Analysis**, facilitated by UNEP/SETAC Life Cycle Initiative, under heading **NEW MANGEMENT TOOLS** – linking biodiversity with core business
- ❖ 1 December 2009, Jakarta, Indonesia



Contact us

Guido Sonnemann, PhD

Secretariat, Life Cycle Initiative
Division of Technology, Industry & Economics
United Nations Environment Programme
15 rue Milan, 75009 Paris, E-mail: sc@unep.fr
<http://lcinitiative.unep.fr/>

Thanks for support to UNEP-SETAC Partners:

- ACC, PWMI & Plastics Europe
- CIRAIG Consortium
- ICMM
- Government of Belgium
- Government of Canada
- Government of Germany
- Government of Switzerland
- ALCALA
- AIST/ Japan
- CI
- EC
- ESCI
- ISO
- US EPA